

Customer No.: 31561
Application No: 10/605,682
Docket NO.: 9507-US-PA

Claim Amendment

Please amend the claims according to the following listing of claims and substitute it for all prior versions and listings of claims in the application.

Claims 1-6 (cancelled)

7. (currently amended) A wide viewing angle liquid crystal display, comprising:

a first substrate having a plurality of thin film transistors, a plurality of scanning lines and a plurality of data lines;

a color filter layer over the first substrate covering the thin film transistors, the scanning lines and the data lines;

a plurality of pixel electrodes over parts of the color filter layer;

a dielectric layer over the color filter layer covering the pixel electrodes;

a plurality of common electrode over parts of the color filter layer, wherein the common electrodes and the pixel electrodes are alternately positioned, and the pixel electrodes, the common electrodes and the dielectric layer together form a plurality of pixel storage capacitors;

a first alignment film over the dielectric layer covering the common electrodes;

a second substrate formed above the first substrate;

Customer No.: 31561
Application No: 10/605,682
Docket NO.: 9507-US-PA

a second alignment film formed above the second substrate, wherein the second alignment film faces the first alignment film; and
a liquid crystal layer formed between the first alignment film and the second alignment film.

8. (original) The liquid crystal display of claim 7, wherein the display further includes a planarization layer over the color filter layer.

9. (cancelled)

10. (original) The liquid crystal display of claim 7, wherein the color filter layer includes a plurality of red-filter blocks, a plurality of green-filter blocks and a plurality of blue-filter blocks grouped together in a regular repetitive pattern.

11. (original) The liquid crystal display of claim 10, wherein a black matrix layer is formed in the space between the red-filter blocks, the green-filter blocks and the blue-filter blocks.

12. (original) The liquid crystal display of claim 7, wherein each thin film transistor includes:

a gate electrode above the first substrate, wherein the gate electrode is connected to a corresponding scanning line;
a gate insulating layer above the first substrate covering the gate electrode;
a channel layer over the gate insulating layer above the gate electrode; and

Customer No.: 31561
Application No: 10/605,682
Docket NO.: 9507-US-PA

a source/drain regions over the channel layer, wherein the source region is connected to a corresponding data line.

13. (original) The liquid crystal display of claim 12, wherein the display further includes a conductive structure in the color filter layer for electrically connecting the drain region with a corresponding pixel electrode.

14. (currently amended) A method of manufacturing a wide viewing angle liquid crystal display, comprising the steps of:

providing a first substrate having a plurality of thin film transistors, a plurality of scanning lines and a plurality of data lines;

forming a color filter layer over the first substrate to cover the thin film transistors, the scanning lines and the data lines;

forming a plurality of pixel electrodes and a plurality of common electrodes over the color filter layer, wherein the pixel electrodes and the common electrodes are alternately positioned;

forming a dielectric layer between the pixel electrodes and the common electrodes, and covering the pixel electrodes;

forming a first alignment film over the color filter to cover the pixel electrodes and the common electrodes;

providing a second substrate;

forming a second alignment film over the second substrate;

Customer No.: 31561
Application No: 10/605,682
Docket No.: 9507-US-PA

forming the second substrate above the first substrate such that the second alignment film faces the first alignment film; and
injecting liquid crystal into the space between the first alignment film and the second alignment film to form a liquid crystal layer.

15. (original) The method of claim 14, wherein after the step of forming the color filter layer, further includes forming a planarization layer over the color filter layer.

16. (original) The method of claim 14, wherein the color filter layer includes a plurality of red-filter blocks, a plurality of green-filter blocks and a plurality of blue-filter blocks grouped together in a regular repetitive pattern.

17. (original) The method of claim 16, wherein a black matrix layer is formed in the space between the red-filter blocks, the green-filter blocks and the blue-filter blocks.

18. (original) The method of claim 14, wherein in the step of providing the first substrate having a plurality of thin film transistors, the thin film transistors are formed by the steps comprising:

forming a gate electrode and a plurality of scanning lines connected to the gate electrode over the first substrate;

forming a gate insulating layer over the first substrate to cover the gate electrode and the scanning lines;

forming a channel layer over the gate insulating layer above the gate; and

Customer No.: 31561
Application No: 10/605,682
Docket NO.: 9507-US-PA

forming source/drain regions and the data lines to connect with the drain region.

19. (original) The method of claim 18, further comprising forming a conductive structure in the color filter layer for electrically connecting the drain region with a corresponding pixel electrode.

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